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Luca Petruzzellis and Antonia Rosa Gurrieri

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Luca Petruzzellis, *Dipartimento di Studi Aziendali e Giusprivatistici, University of Bari*
Antonia Rosa Gurrieri, *Dipartimento di Scienze Giuridiche Privatistiche, University of Foggia*

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Summary

In order to face the new competitive scenario, Apulian textile firms are involved in a process of change and are trying to adopt a networking approach in analysing the international propensity of SMEs.

The case of the textile network in Apulia has been analysed using a semi-structured questionnaire submitted to a sample of family businesses in order to verify the influence of network on their internationalisation process.

The contribution that the network can give to the single firm in its internationalisation process depends also on the level of cooperation in the network. In fact, relationships – at least dual vertical relationships – are the key to overcoming size limit and providing value to all the partners involved.

The research attempted to offer a better academic understanding of the role of network in international competitive advantage. Future research should be based on cross countries analysis, in order to determine whether or not the set of internal determinants of internationalisation propensity remain stable from one country to another.

The findings should also be useful to local governance for a better understanding of the network phenomenon in order to develop appropriate programmes for training and supporting SMEs in the global market. This paper provides a wide analysis of the network role in the internationalisation process in a low technology sector.

Keywords: Internationalisation Strategies, Network Approach

JEL Classification: L2, D85

Address for correspondence:

Antonia Rosa Gurrieri
Dipartimento di Scienze Giuridiche Privatistiche
University of Foggia
Largo Papa Giovanni Paolo II
71100 Foggia
Italy
Phone: +390881582246
E-mail: a.gurrieri@lex.unifg.it

Introduction

The networking phenomenon has been generally ascribed to developed economy contexts (Porter 1998) and proves to be one of the most effective ways to achieve development and profitable performances. In fact, various successful examples exist all over the world, such as in Italy, Lombardy and Apulia (textile), northern Italy (fashion shoes), in the USA, the Silicon Valley (computers and high-technology electronics), and northern California (wine).

The so-called ‘geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities’ (Porter 1998: 199) multiplies all the positive issues; in fact, such geographic proximity enhances trust, inter-firm cooperation and facilitates the transfer of tacit knowledge (Malmberg et al., 1996; Gurrieri and Petruzzellis, 2006).

Networks see the presence of the whole productive and commercial chain, in which upstream suppliers provide raw materials, specialised equipment and services, and downstream customers are represented by either the final consumer of the product or an intermediate link in the overall supply chain. Therefore, pipeline-type relationships are created and spatially concentrated. As a consequence, the value of a product is determined by a network externality when it increases with the number of product users. Thus network externalities lead to demand-side economies of scale (Farrell & Klemperer, 2003). Internationalisation is a very complex phenomenon due to the large variety of ways in which to select and enter foreign markets (Coviello and McAuley, 1999) and the ways of carrying out this process, such as exporting, cooperation and alliances and productive investment overseas (Root, 1994). Literature has investigated in particular the export performance from both a macroeconomic perspective and a microeconomic one, trying to identify the determinants of foreign trade and country/industry competitiveness as a whole. Structural and organizational characteristics of firms can affect export performance. In fact, most empirical research tends to conclude that the international performance of firms is influenced by both institutional performance and the local conditions and their own competitive and strategic capabilities (Aaby and Slater, 1989; Leonidou, 1998).

This paper aims mainly to analyse the competitive capabilities of firms, more specifically organisational, structural and managerial factors, as a source of international success.

Literature review

The literature on network internationalisation examines how firms compete and when they choose to cooperate by making their products compatible. Three factors are of particular interest to the present study: (1) the role of the actual and expected size of the inter-firm relationships; (2) the impact of the network managerial structure; and (3) the evolution of the network.

Brown and Bell (2001) maintain that clusters may influence the internationalisation of SMEs through marketing externalities such as intra-cluster referrals, credibility and reputation, informational spill-overs and active joint marketing. Brown and McNaughton (2003) and Hagberg-Andersson and Virtanen (2006) highlight that in recent years the number of structured networks which were created for certain purposes increased, thus making the location in a network a rational or deliberative action.

Moreover, networks can be especially useful by providing external, regional relationships (Almeida, 1999; Saxenian, 1990) that can compensate for the resources it lacks (McNamee *et al.*, 2000), as well as facilitating knowledge-building and innovation (Almeida, 1999; Audretsch and Feldman, 1996; Shaver and Flyer, 2000).

In fact, the very nature of innovation (Malmberg *et al.*, 1996), facilitated by information flow (Enright, 1998), contributes to locally defining network boundaries, emphasising that sources of competitive

advantage are highly localised in nature (Berry and Taggart, 1994; Enright, 1999; Cantwell and Iammarino, 2001). Consequently, international networks often tap into the local milieu of clusters (Todtling, 1994), as is evident when strategic asset-seeking multinational subsidiaries locate within clusters (Birkinshaw and Hood, 2000). Indeed, local network relationships could provide useful access to foreign markets and, if leveraged appropriately, lead to joint efforts that are synergistically efficient (Brown and Bell, 2001).

The network approach states that internationalisation is a process that takes place through networks of relationships (Hakansson and Snehota, 1995). At present, relationships among firms follow a complex logic of interaction and include cooperation and competition, the so called cooptation. Therefore, the contribution that the network can give to the single firm in its internationalisation process depends also on the level of cooptation in the network. In fact, relationships – at least dual vertical relationships – are the key to overcoming size limit and providing value to all the partners involved.

In particular, SMEs are forced to begin or accelerate their internationalisation processes in order to overcome the aggressive local competitiveness, in search of new markets for their products, new opportunities and enterprise profitability growth in an ever more global environment (Cedrola, 2005). While the international nature of the economy is evident, especially for SMEs, there is not a suitable theory able to explain the specificity by which those kind of firms internationalise. In fact, there are numerous types of internationalisation processes for SMEs that have been identified (Freeman, 2002).

The network approach focuses on the relationships between firms involved in production, distribution and use of goods and services within an industrial system. According to this view firms internationalise by establishing and cultivating relationships with partners in foreign networks, by developing relationships and increasing resource commitments in networks abroad where a firm is already cooperating; and/or international integration by increasing coordination within different networks.

Literature on SMEs engaging in international operations (O'Farrell and Hitchens, 1988; Christensen and Lindmark, 1993; Kauffmann, 1994) states that SMEs that make up a network are characterised by incompleteness due to their lack of resources, competences and technologies, thus depending on those of suppliers, distributors and customers. In relation to their opportunities of internationalisation, this poor availability of resources caused fewer possibilities in choosing the appropriate markets and entry modes (Alon, 2004). In this sense the local context and the firms that are created represent the real resource for each firm, thus drawing upon information, knowledge and support services shared with partners in their home environment (Meyer and Skak, 2002).

Networks benefit from both competition and cooperation. Competition forces all members to improve their efficiency in controlling costs and look for ways to enhance their differentiation capabilities. This competitive environment motivates firms to improve themselves. However, cooperation among members occurs vertically within the supply chain and horizontally whenever there is no direct competition or an outside threat to the overall existence of the cluster. Trust between organisations has been found to be one of the critical success factors for successful networks (Batenburg and Rutten, 2003), since the local proximity of geographic clusters increases more frequent face-to-face interactions. Moreover, productivity increases for members due to better access to employees and suppliers, to specialised information and public institutions, increased availability of complementary products and services, and better motivation and measurement.

Research questions

Most existing studies acknowledge the roles played by innovation (Wakelin, 1998; Basile, 2001; Nassimbeni, 2001; Bleaney and Wakelin, 2002; Gua and Ma, 2003) and spatial agglomeration (Bagella and Becchetti, 1998; Bagella *et al.*, 1998; Becchetti and Rossi, 2000; Cainelli and Zoboli, 2004) on the

export behaviour of firms. More recently the 'Triple Helix' approach (Cooke, 2005) focuses on the role of specific 'entrepreneurial universities' in relation to industry and government, that are networked in more systemic interaction since the knowledge economy and innovation as a strategic competitive asset demand greater scientific involvement in production. Firms gain advantage from the knowledge network capabilities and 'open innovation' (Cooke, 2005) that networks contain.

However, this paper, in dealing with a low tech industry such as the Italian textile sector, analyses the exporting phenomena and internationalisation as a process of gradual development during which firms increase their commitment in foreign markets (Lee and Young, 1990; Evangelista, 2000; Dean et al., 2000). Therefore, the role of network in fostering the international strategies of each company has been investigated by analysing firms, networks formed by them and the overall system.

Belonging to a network enables firms, and in particular SMEs, to derive benefits from various advantages. Firstly, a firm's reputation benefits from the collective network resources, thus enhancing the possibility of unsolicited orders and a positive disposition towards a firm from the network that proactively seeks business from a prospective foreign customer, when this reputation becomes international (Karagozoglu and Lindell, 1998). Better access to public institutions that offer training and specialised infrastructures are more likely to align the capabilities and products of firms with network than with a single firm. Secondly, quality, in terms of product and relationship, depends on the access to specialised resources (Saxenian, 1990; Lorenzoni and Ornati, 1988; Shaver and Flyer, 2000). Moreover, the close proximity within the group of firms that produce complementary products and services directly and strongly affect each firm's upgrades in their product portfolio.

Finally, SMEs have a better access to local network relationships with useful international links (Birkinshaw and Hood, 2000). For example, network provides an opportunity to SMEs for collaboration (Enright, 2000), which has the potential to lead to international business opportunities.

Structural and organisational characteristics of the business influence the international strategies: the firm's size, the availability of certain technological capacities, the motivations and skills of the managers involved in the internationalisation process and the development of an appropriate marketing policy are key factors that have played a part in the internationalisation of firms (Miesembock, 1998; Chetty and Hamilton, 1993). Therefore, it has been hypothesised that:

H1: The internationalisation level is higher at network level than for each single firm.

Moreover, many authors (Madhok, 1997; Gurrieri and Petruzzellis, 2006; Boschma, 2005; Cooke, 2005; Zucchella et al., 2004) maintain that SMEs have to rely on networks and relationships to overcome disadvantages as they internationalise. The relationship is bidirectional: the firm, with its decision, influences the network and the network at the same time influences the firm's behaviour. In particular, for small firms the network reinforces the internal learning processes and provides access to new customers and suppliers located abroad. For many SMEs establishing and/or reinforcing relationships with local counterparts is a fundamental key for creating an international network: relationships are developed as bridges into foreign markets (Meyer and Skak, 2002).

Indeed, inter-organisational cooperation is the only way for SMEs to survive in the domestic market and international competition. Coopetition (Nalebuff and Branderburg, 1996) as an implementation of the network approach, requires a strong role of the territorial institutions in fostering network/firms' capabilities on international markets. Thus, it has been hypothesised that:

H2: The interaction of the network actors enhances the international performance of the whole network system.

Methodology

Data were collected through a semi structured questionnaire submitted between march 2006 to January 2007 to firms in the Apulian textile industry (Italy).

The questionnaire was initially mailed, with a cover letter in which the aim of the research was specified and managers or owners were asked to arrange an appointment for an interview. After one week the managers were contacted by telephone in order to arrange the meeting.

The questionnaire was divided into three parts: the first dealt with the firm demographics and organisational issues; the second dealt with the entrepreneurial issues and the third analysed the network features and its international strategies.

The textile industry was chosen since it is one of the most important sectors in Italy and presents, as with the majority of firms involved in Italian networks, a high number of family-run firms which have a low level of social capital and technology as well as a well-established tradition.

The success of Apulian production can be found in the productive organisation based on close contacts throughout the production chain and on network relationships between firms in the sector. The area investigated shows, on the one hand, many small, often family-run, firms, which are subcontractors for both other local and national firms. On the other hand, there are larger, more organised firms with their own brands and which develop competitive strategies based on the image and quality of the products they offer. Moreover, in the area there are also franchising networks, created by firms which are well-established at local and national level, and various consortia organised by the textile companies in the eastern area, which affect the performance of the firm and the network level of integration and internationalisation (Capello and Faggian, 2005; Zaheer and Bell, 2005).

The main objective of this paper is to analyse the internationalisation propensity of the network investigating both the role of each productive unit, identifying the relevant factors for the competitiveness of firms in the global competition, and some particular relationships between firms and their inherent social issues.

The sample included 331 firms located in Putignano, Castellana, Alberobello, Noci, Locorotondo and Martina Franca (in the area of Bari), an area with a well-established tradition in the textile industry. However, 141 firms were without any identification and so are considered ghost-firms; 17 were closed down, so the final sample was of 187 family-firms. Of these 187 units 166 replied to the questionnaire correctly representing a response rate of almost 88.7%.

The network in the area benefits from the territorial institutions in the transmission of ability and relationships among the families of local entrepreneurs. Moreover, the culture of co-operation which is typical of this network is based on family relationships, on trust between each family and reputation. The strong relationship between firms and this network and the specific competence based on families means that they are not affected by the competitiveness of emerging economies, especially in terms of costs. The type of manual labour, specific in the production of bridal and first communion wear, is performed by the women in the family, therefore the generational know-how represents a unique source of competitive advantage.

Most of the firms (about 48%) were founded between 1970 and 1990, a time period in which the positive national performances induced people to set-up a business in this sector. The mean age of the entrepreneurs is 46 years, the youngest is 22 while the oldest is 70 years old. Furthermore, most firms (63.3%) are service based, supplying exclusively to the other local companies.

50% of the sample is specialised on the production of bridal and first communion wear, while children's wear is often used as a diversification strategy in order to survive and compete more successfully on the global market. Moreover, almost 63% of local firms are subcontractors of other local firms and only 12.7% serve the final consumer.

In this area, the figure of the entrepreneur is strongly identified by familial links. Most of them are a second generation entrepreneur. He/she in most cases has inherited from their parents the art and

manual specialisation. The new generation prefers to remain in the market in the same size category as it believes it can guarantee a minimum efficiency scale and a niche position. In general, inter-generational mobility within the firm is still quite high even if this has decreased over time. Male heirs become entrepreneurs much more easily since they are better trained in the managerial sector. Female family members begin their entrepreneurial career by inheriting and improving the art of dressmaking, and only at a later stage take on a managerial role.

From this core the family characteristic of the firm emerges, in fact most of the firms (41.1%) are run either by the owner or by the whole family (parents and siblings). Therefore, the structure of these firms is very simple, reflected in the level of managerial complexity. Although almost all the sample (88%) had introduced different types of innovation, in most cases it was only the adoption of new machinery and new material in the production. Moreover, the social characteristics are not only a part of the legal and family inheritance of the firm, but also in the transfer of experience in the industry (acquired by the children and former employees) and in the techniques inherited. Knowledge which is handed down motivates heirs to innovate, especially by introducing structural changes in the firm (e.g. type of production, number of employees, etc.).

Family traits, typical in these firms, determine the conditions and trusting relationships among the different members of the family network. The close working relationship between the families provides the conditions for employing their children and relatives who, in this way, are no longer competitors but part of the local network. Each family in this area, which works in this sector, has a leading role as they dominate particular and typical niche markets each of which is connected to the other in a close-knit network of social ties.

The consolidation and acquisition of capabilities by each family is at the basis of network relationships. At a first stage the establishing and transmission of codified knowledge among family members has a key role. Later, reputation, quality and institutional ties determine the level of relationship.

The variables considered measured the level of openness beyond the domestic boundaries that, as hypothesised, increases with the network. The aim of the paper is to investigate the international performance of a network using the firm's entrepreneurial/managerial and network/institutional variables as exploratory ones.

At the firm level, the internal characteristics were measured by the size of the company (number of employees) (Giuliani, 2006), experience in the industry (years on the market) (Dosi and Malerba, 1996), ownership and state of foreign commitment (exporting experience) (Cainelli and Gurrieri, 2005). At the managerial/entrepreneurial level, perception of management was measured by reputation, quality and price competitiveness, and international marketing strategy (pricing policies, promotion activities and distribution system). At the network level, inter-firm cooperation (Gurrieri and Petruzzellis, 2006), external relations (Kaiser, 2002), collaboration with institutions (Boschma, 2004) and spatial agglomeration (Boschma, 2005) were measured.

Results

In order to assess and confirm the triple-way relationships (firms → network ← institutions), regression analysis was carried out to analyse the network internationalisation intensity and to identify its key factors.

Firstly, since the aim of the paper is to explain the network influence on the internationalisation process of firms, a number of independent variables were measured. The most important one is the international marketing strategy of the firm, as the knowledge base of a firm that is required to develop a structured internationalisation process. Therefore, it is to be expected that the international marketing strategy positively affects the network international connectivity.

Besides international marketing strategy, the analysis includes other firm-specific features that might affect the network internationalisation. The size of firms has been measured in terms of employees, the age of the firm has been determined by the number of years since the establishment of the firm, while the experience of the entrepreneur has been evaluated by the number of years the entrepreneur has experience as an entrepreneur or employee in the textile industry or related sectors.

Firstly, the variables were categorised and tested with Spearman's rho in order to analyse the relations between firm-specific and network variables.

Table 1: Spearman's Rho coefficients

	Level of local relations	Level of international relations	Level of market relations	Level of institutional relations
International marketing strategy	.102**	.114**	.158**	N.S.
Firm size	.072*	.123**	.141**	-0.072*
Firm age	.106**	-0.114**	.158**	N.S.
Experience entrepreneur	.102**	.153**	.190**	N.S.

* p-value = .05

** p-value = .01

Spearman correlation coefficients, which are all statistically significant even though their absolute values are not high, show that the four levels of relations considerably impact internationalisation process. Furthermore, as expected, firms with higher international marketing strategies are more central in the internationalisation process of the network, and have a wider range of local and non local network relations. Therefore, having a high international propensity means the firm is well equipped to identify and process any internationalisation opportunity that comes from non local sources. However, no significant relationship exists between internationalisation process and the institution role, probably due to the lack of social and institutional proximity in the area (Boschma, 2005), which is quite common for a Southern Italy region where social capital, being a potential bridging mechanism for local agents to overcome uncertainty, is often missing (Putnam, 1993).

In order to test the internationalisation intensity of the network in relation to thirteen variables, a logistic regression was carried out.

Tab.2: Descriptive variables

<i>Firm</i>	
OWNERSHIP	Family business
N_EXPORT	Number of exported products
DIMENSION	Number of employees
EXPERIENCE	Number of years in the business
<i>Management</i>	
INT_MKT_STRAT	International marketing strategies (pricing, promotion and distribution)
QUALITY	Management perception

REPUTATION	Management perception
EDUCATION	Entrepreneur's level of education
<i>Network</i>	
UNIV_COLLAB	Collaboration with universities
BANK_COLLAB	Bank loans
EXT_RELATIONS	Links with firms belonging to other networks
INT_RELATIONS	Links with the network firms
SPAT_AGGLOM	Location

Tab.3: Results of the logistic regression model

Independent variables	Unstandardised Coefficients		Wald	Sig	Exp(B)
	B	Std. Error			
Constant	-.971	.663	2.144	.143	.379
OWNERSHIP	1.406	.592	5.633	**	4.079
N_EXPORT	1.240	.605	4.207	**	3.456
DIMENSION	-.245	.420	.340	-	.783
EXPERIENCE	.290	.544	.284	-	1.336
INT_MKT_STRAT	.815	.447	3.320	*	2.258
QUALITY	.272	.751	.131	-	1.312
REPUTATION	1.878	.692	7.358	**	6.539
EDUCATION	.503	.824	.372	-	1.653
SPAT_AGGLOM	-.520	.786	.438	-	.595
UNIV_COLLAB	-.468	.460	1.034	-	.626
BANK_COLLAB	-.954	.409	5.431	**	.385
EXT_RELATIONS	.777	.451	2.963	*	2.174
INT_RELATIONS	.842	.455	3.422	*	2.321

(***) $p < .001$; (**) $p < .005$; (*) $p < .10$

The results of the logistic regression analysis are interesting, even though the fitting is low (Cox & Snell R^2 is .238). In fact, seven factors resulted to be statistically significant, thus positively affecting the internationalisation process: at the firm level, the significance of the coefficients of firm's ownership and export propensity means that the familial link, given by the first variable, has a determinant role in fostering the export propensity. This is also confirmed by the two variables that resulted significant at the entrepreneurial/managerial level, i.e. reputation and international marketing strategy. In fact, the success on the international market depends above all on the credibility, both at a personal level (reputation strictly linked to ownership) and at a managerial one (marketing strategies strictly linked to export propensity).

Finally, at the network level, external and internal relations strongly influence the internationalisation in that they foster the network structure and position it (and consequently all the firms) as a unique system with its own peculiarities. Instead, the variable related to the collaboration with banks is significant even though has a negative coefficient. This was expected because the more internationalised the firms the less they use bank loans.

Indeed, the culture of cooperation seems to be the basis of the relationships between firms in this area which are founded on trust between families. The strong relationship between firms in this cluster and the specificity of family based skills means the firms are not affected by the competitiveness of emerging

economies, especially in terms of costs. In fact, the type of manual labour specific to textile production is highly traditional and specialised only for those who benefit from the generational know-how.

Conclusions

This study has underlined that the network greatly influence the internationalisation process and capacity of firms. Certainly the analysis has some limitations, such as the sample size, the area and the variables considered, but could represent a starting point on which to base future research on cross countries analysis, in order to determine whether or not the set of internal determinants of internationalisation propensity remain stable from one country to another.

The research attempted to offer a better academic understanding of the role of network in international competitive advantage. The findings should also be useful to local governance for a better understanding of the network phenomenon in order to develop appropriate programmes for training and supporting SMEs in the global market.

However, networks are limited by their closure and the global competition challenges them to open their boundaries. Thus, interacting with external networks, an international marketing approach enables the local network to achieve higher levels of competitiveness and operate successfully in highly competitive markets. In fact, many clusters also include universities, standards-setting agencies, vocational training providers, trade associations, and even governmental institutions, since clusters benefit from competition and cooperation within the cluster and from increased productivity.

In conclusion, the contribution that the network can give to the single firm in its internationalisation process depends also on the level of coopetition in the network. In fact, relationships – at least dual vertical relationships – are the key to overcoming size limit and providing value to all the partners involved.

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